

REMARKS

With this submission, claims 1, 11-14, and 18 are amended, and claims 10 and 15-17 are cancelled. Claims 1-9, 11-14, and 18-20 remain pending in this application. Reconsideration and review of the amended claims are respectfully requested.

Copies of Information Disclosure Statement and references previously submitted attached

Applicants would like to call the Examiner's attention to the copy of the Information Disclosure Statement ("IDS") attached to this Amendment, along with copies of the references cited on this IDS. Applicants originally filed the attached IDS on June 22, 2004, but did not receive an initialed copy of this IDS or any indication that the Examiner had considered the references cited on it in the final Office Action issued by the Examiner. Applicants request that the Examiner consider these references and initial the IDS.

Claim Rejections – 35 U.S.C. §102(b)

The Examiner rejects claims 1, 2, 5, 6, 9, 11, 18 and 19 under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 6,024,018 to Darel et al.

The Examiner states that Darel et al. discloses a camera assembly having an image sensor, a light source, an optics assembly, a microprocessor and image processing hardware, all positioned within a housing. The Examiner points to Figs. 1, 2, and 3 and columns 5 and 6 through column 7, line 23, and col. 14, line 41 through column 15, line 16 for support. Further, the Examiner refers to the description for Fig. 3, which reads "a side sectional view schematic diagram illustrating the optical and illumination portion of the image acquisition unit."

With reference to Figs. 1-3 of Darel et al. and the accompanying description, Darel et al. simply does not teach or suggest a camera assembly having image processing hardware positioned within the same movable housing as the image sensor, light source, and optics assembly, as required by Applicants' amended claim 1. First, merely because one component is a portion of a system, it doesn't necessarily follow that that component is located in the same housing as the other components of the system. In fact, Fig. 1 of Darel et al. is described in the "Brief Description of the Drawings" and the specification at column 5, line 19 as a high level block diagram of a color control system 10. Similarly, Fig. 2 is described as being a high level block diagram of the color control system 10 integrated into a printing press 22. As such, the

single hatched rectangle in Fig. 1 merely groups together the components of the color control system 10. This grouping of components does not mean that the image processing hardware is positioned within the same housing as the image sensor, light source, and optics assembly. This interpretation is supported by reference to Fig. 3, which shows the image acquisition unit 12, including image sensors 42, 44, 46, light sources 66, 68, and optics assembly within structural frame 30, but not showing the image processing unit 14 within the structural frame 30. Because of its absence from Fig. 3, presumably, image processing unit 14 is located elsewhere. Further, structural frame 30 is in no way movable and thus Darel does not describe or suggest each and every limitation of claim 1. Therefore, Applicants respectfully submit that claim 1 is allowable over the Darel et al. reference.

Claims 2-9 depend from independent claim 1 and are allowable for the reasons discussed above with respect to claim 1, as well as for other reasons not discussed herein.

With respect to Applicants' amended claim 11, as discussed above with respect to claim 1, Darel et al. does not teach or suggest image processing hardware together with a camera and a light source positioned within the same movable housing, as required by claim 11. Similarly, with respect to amended claim 18, Darel et al. does not teach or suggest image processing hardware together with a camera, a light source and an optics assembly positioned within the same movable housing, as required by claim 18. Applicants therefore submit that claims 11 and 18 are also allowable over the Darel et al. reference.

Claim 19 depends from independent claim 18 and is allowable for the reasons discussed above with respect to claim 18, as well as for other reasons not discussed herein.

The Examiner rejects claims 1, 2, 4, 8, 9, 11, 14, and 16-19 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,018,213 to Sikes.

The Examiner states that Sikes discloses a camera assembly having image processing hardware positioned within the housing and points to col. 3, line 59 – col. 4, line 35 of the Sikes specification as support. With reference to Fig. 1 and col. 3, line 59 – col. 4, line 35 of the Sikes specification, Sikes does not teach or suggest a camera assembly having image processing hardware positioned within the same movable housing as the image sensor, light source, and optics assembly, as required by Applicants' claim 1. The image sensor used by Sikes is the video camera 116. As stated in the Sikes specification, the "image data generated by the camera in acquiring the image is coupled to the control circuitry within the enclosure 64 which analyzes

the image data to extract registration information.” See col. 4, lines 29-33. As illustrated in Fig. 1, the video camera 116 of Sikes that acquires the image of the printed web is **spaced from** the enclosure 64 and is not contained within the same housing, as recited in claim 1 of the present application. Enclosure 64 and image processor 130 are not movable with respect to the web 114. Thus, Sikes does not teach or suggest a camera assembly having a movable housing that contains the image sensor, the light source, the optics, and the image processing hardware, as recited in claim 1. Applicants respectfully submit that amended claim 1 is allowable over the Sikes reference.

Claims 2-9 depend from independent claim 1 and are allowable for the reasons discussed above with respect to claim 1, as well as for other reasons not discussed herein.

With respect to Applicants’ amended claim 11, as noted above, it is clear from Fig. 1 of Sikes that the image processing hardware of Sikes is housed within enclosure 64, separate from the camera 116. Enclosure 64 is not movable by a transport system laterally with respect to the web 114. Thus, Sikes does not teach or suggest a camera assembly having a movable housing that contains the camera, the light source, the optics, and the image processing hardware, as required by Applicants’ claim 11. Applicants respectfully submit that claim 11 is allowable over the Sikes reference.

With respect to Applicants’ amended claim 14, the image processing hardware of Sikes is housed within enclosure 64, separate from the camera 116. As discussed above with respect to claim 1, Sikes therefore does not teach or suggest a camera assembly for use in determining color registration error having a movable housing that contains the camera, the light source, the optics, and the image processing hardware, as required by Applicants’ claim 14. Applicants respectfully submit that claim 14 is allowable over the Sikes reference.

With respect to Applicants’ amended claim 18, the image processing hardware of Sikes is housed within enclosure 64, separate from the camera 116. As discussed above with respect to claim 1, Sikes therefore does not teach or suggest a camera assembly for use in determining color registration error having a movable housing that contains the camera, the light source, the optics, and the image processing hardware, as required by Applicants’ claim 18. Applicants respectfully submit that independent claim 18 is allowable over the Sikes reference.

Claims 19 and 20 depend from independent claim 18 and are allowable for the reasons discussed above with respect to claim 18, as well as for other reasons not discussed herein.

Claim Rejections – 35 U.S.C. §103

The Examiner rejects claims 3, 7, 8, 10, 12, 13, 15 and 20 under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,024,018 to Darel et al. Further, the Examiner rejects claims 4, 14, 16, and 17 as being unpatentable over Darel et al. and further in view of U.S. Pat. No. 5,018,213 to Sikes et al. Reconsideration is respectfully requested.

As discussed above, claims 3, 4, 7 and 8 are dependent on claim 1 and are allowable for at least the same reasons as those advanced with respect to claim 1.

With respect to Applicants' amended independent claim 12, Darel et al. does not teach or suggest image processing hardware together with a digital communication interface, a scanner, and a light source positioned within the same movable housing, as required by claim 12. Darel et al. does teach the use of a local area network at column 5, lines 24-27 for the components to communicate, but the specified components are not all within the same movable housing.

With respect to Applicants' amended claim 13, Darel et al. does not teach or suggest image processing hardware together with a CCD area scanner and a strobe light source positioned within the same movable housing, as required by claim 13.

With respect to Applicants' amended claim 14, Darel et al. does not teach or suggest image processing hardware together with a camera, a light source, and an optics assembly positioned within the same movable housing, as required by claim 14. Further, as explained below, Sikes et al. does not cure the deficiencies of Darel et al.

Therefore, claims 10, 12-14 are allowable over the cited references.

The Examiner rejects claims 3, 5, 6, 7, 10, 12, 13, 15, and 20 under 35 U.S.C. 103(a) as being unpatentable over Sikes in view of Miyauchi et al. (U.S. Patent No. 6,456,733).

Dependent claims 3, 5, 6, and 7 depend from independent claim 1, and dependent claim 20 depends from independent claim 18, and are thus allowable for the reasons discussed above with respect to claims 1 and 18, respectively, as well as for other reasons not discussed herein.

With respect to Applicants' claim 12, the Examiner states that arguments analogous to those presented for claims 1, 2, and 7 are applicable to claim 12. As discussed above with respect to claim 1, Sikes does not teach or suggest a camera assembly having a movable housing that contains the scanner and the image processing hardware, including an FPGA, as recited in claim 12, since the image processing hardware of Sikes is housed within enclosure 64, separate from the camera 116.

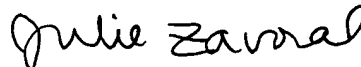
Miyauchi et al. does not correct the deficiencies of Sikes. Miyauchi et al. discloses an image inspection apparatus having an image reading section 2 and a judgment section 4. The image reading section 2 includes a light emitting diode 21 as a light source, an optics assembly (including lenses 22, 32 and mirror 23) and photodiodes 21 for receiving reflected light from the surface of the printed web. With reference to Fig. 1 of Miyauchi et al., the judgment section 4 is spaced from the image reading section 2, and includes components to store reference image data and compare signals output by a converter with the reference image data stored in memory, and determines whether the output signals are within acceptable ranges. Miyauchi et al. does not teach or suggest a camera assembly having a movable housing that contains a scanner and the image processing hardware, as recited in claim 12. Applicants respectfully submit that claim 12 is allowable over the Sikes and Miyauchi et al references.

With respect to Applicants' claim 13, the Examiner states that arguments analogous to those presented for claims 1, 2, and 7 are applicable to claim 13. As discussed above with respect to claims 1 and 12, Sikes does not teach or suggest a camera assembly having a movable housing that contains the camera, the microprocessor, and the image processing hardware as recited in claim 13, as the image processing hardware of Sikes is housed within enclosure 64, separate from the camera 116. Miyauchi et al does not correct the defects of Sikes.

With respect to Applicants' claim 20, claim 20 is dependent on independent claim 18, and is allowable for the same reasons claim 18 is allowable, as discussed above.

In view of the foregoing, entry of this response and allowance of claims 1-9, 11-14, and 18-20 are respectfully requested. The undersigned is available for telephone consultation at any time.

Respectfully submitted,



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